Students were asked to compute the derivative of $f(x) = \sin(e^x - x^2 + 2)$. Find the derivative yourself. Then, look at each of the following (incorrect) answers. Write a sentence about what each student did wrong on the problem and what they should remember or think about next time in order to get a similar problem correct in the future.

1. $f'(x) = \cos(e^x - x^2 + 2)$
2. $f'(x) = \cos(e^x - 2x)$
3. $f'(x) = \cos x(e^x - 2x)$
4. $f'(x) = \cos(e^x - x^2 + 2)(e^x - x^2 + 2)$